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(54) Title: RADIATION SOURCE

## (57) Abstract

A radiation source (30) is provided comprising a first active layer (42) coupled to a second active layer (62), wherein the first active layer (42) produces primary radiation of frequency  $\nu_1$  by appropriate stimulation, and the primary radiation is converted by the second active layer (62) to secondary radiation of frequency  $\nu_2$  for subsequent output. The coupling between the first and second active layers is achieved by an intermediary layer (58) disposed between the first active layer (42) and the second active layer (62). The radiation source (30) further comprises a p-n junction (48) incorporated in the first active layer (42), where injection of electrical carriers into the first active layer (42) from the p-n junction stimulates the first active layer (42) to emit the primary radiation.

